WHAT A BOTANIST MAY SEE IN HONOLULU

A. B. LYONS IN THRUM'S ANNUAL

Six days without sight of land. No wonder there is excitement among the passengers when, in the dawn of the seventh day, they distinguish close at hand outlines of mountains losing themselves above in cloud.

With impatience they wait for daylight, eager to see once more the green of living plants. It is well that their eagerness does not hasten the imperturbable course of nature, for the volcanic cones of the lee coast they are passing, though striking in outline, are nearly bare of vegetation.

At last as we pass Diamond Head, with the entrance of the harbor only three miles ahead, the growing light enables us to discriminate the deep green of the tree-embowered city, the paler shades of grass lands and the ruddy brown of the great tufa cone in the foreground. The fringe of cocoanut palms along the Waikiki beach, distinguishable even to the naked eye although two miles distant, tells us that we are in the tropics. Otherwise, while the verdure delights the starved eye as verdure, there is nothing in it suggestive of tropical luxuriance. Indeed, unless there have been copious rains, the country will strike one as rather parched.

A botanist, new to the tropics, will be eager to make closer acquaintance with the vegetation seen thus in mass in the distance. He tries with his field glass to make out details as the steamer continues its course, parallel with the shore, but at a tantalizing distance, owing to the coral reef.

Arrived at the dock he will look in vain for any green thing. Even the water will be destitute of the weeds that would seem to him prizes. He must content himself with watching the kanaka boys, clad save for a breech cloth in their bare, brown skins, diving for the coins that passengers throw into the water.

At last he is safely stowed in what is called a hack with the agreeable prospect of a breakfast on shore occupying a large part of his thoughts, and as he is whirled on through town he catches glimpses of unfamiliar trees and shrubs that make him impatient to form their closer acquaintance.

The results of his observations in the next few days he may summarize somewhat as follows: The streets of Honolulu for the most part are unshaded, although the city seems like one great park—the houses, in their spacious grounds embowered in trees and shrubbery. Palm trees abound of numerous species. Most stately of all is the royal palm, always rigidly erect, its head of comparatively few pinnate fronds surmounting the pale colored, smooth, gracefully tapering column of its stem. Less striking but more beautiful is the date palm, whose slender, numerous fronds curve gracefully outward and whose erect, shaggy, massive trunk is symbolic of strength in repose. There are palms with slender stems not more than three inches in diameter and twenty feet high, stocky palms with immense fronds twice as large and three times as numerous as those of the royal palm, the stem two feet or more in diameter and only ten or fifteen feet high, palms with smooth, strictly cylindrical jointed trunks, looking like gigantic bamboos, fan palms, feathery palms, palms with berry-like drupes, palms with cone-like fruit, palms bearing nuts small and large, naked and covered with a husk. Queen of them all with its slender, crooked trunk 50 to 100 feet high, its plume of magnificent, gracefully waving, yellow green fronds and its generous burden of fruit is the cocoanut palm, which however, finds the climate of Honolulu scarcely warm enough for its finest development.

One will find in Honolulu very few plants belonging to the original flora of the islands. Even the grasses and weeds are nearly all exotic. The few "indigenous" trees occasionally planted are after all not aboriginal, having been brought from the Polynesian islands further south by the original settlers. Very few species peculiar to the Hawaiian Islands are to be found anywhere except in the forests of the interior, where such species mostly originated. There are, however, many species of littoral plants which are widely distributed, the seeds, tubers or stems being transported long distances without injury by the salt sea water. These, with some cosmopolitan ferns, whose spores are readily carried long distances by wind, or accidentally adhering to the feathers or feet of migratory birds, are about the only truly native plants one will see in the vicinity of Honolulu. Only a few of the 135 or more native ferns are commonly planted in gardens. The one that will particularly attract attention is the birdsnest fern, Neottopteris nidus, which is frequently placed in the crotch of a branching tree trunk, its favorite location in its habitat. One would not recognize it at first glance as a fern at all. Its fronds are entire, 3 to 5 feet long, by 5 to 7 inches wide, forming a regular crown. The foliage is rather that of an indigenous plant like the banana than a fern, but the spores growing on its under surface betray it.

The tree ferns which abound in the forest, and which are peculiar Hawaiian species, you will rarely see in cultivation in Honolulu. They do not thrive in so dry a climate. This is unfortunate, for nothing could be more ornamental. The finest of them is the pulu fern, Gibotium Chamissoi, whose uncoiling young fronds are clothed with a glistening, silky, capillary chaff of an old gold color, fine and soft as the finest wool; formerly collected under the vernacular name pulu for filling pillows and mattresses—the same thing that in Sumatra is known as pengawar jambi, or the paku kidang, used by surgeons as a styptic. The fern trees in the woods have trunks six to fifteen or even twenty feet high and six to ten inches or more in diameter.

Among the indigenous trees occasionally seen in Honolulu is the breadfruit tree, which is planted as a shade tree with an eye to utility. The young trees are very beautiful as long as they retain their symmetrical, pyramidal form. The ample, dark green, rigid leaves, more than a foot long and pinnately lobed make a very dense shade, and suggest the idea of extraordinary vigor of growth which is carried out consistently by the great green globes of its fruit. In the older trees the beauty of symmetry is lost, but there remains an air of sturdy self assertion which seems to excuse their grotesque ugliness.

Another tree doubtless imported by the aborigines is the ohia, or mountain apple, Eugenia Malaccensis, occasionally seen in Honolulu, but not happy where there is so little rain. A noble tree it is under favorable conditions, with its large, oval, deep green, shining leaves, and the scarlet tassels of its numerous blossoms, but it is when the fruit is ripe that the tree is in its glory, great clusters of the deep red luscious looking "apples" clinging about its branches and larger limbs everywhere. Juicy and refreshing the fruit is, although rather insipid.

Conspicuous by the paleness of its silvery foliage among the shade trees near the city, as well as in the valleys of the interior, is the Kukui, or candlenut tree, Aleurites Moluccana. The fruit looks something like the black walnut, but is larger and frequently contains two nuts. These are as large as an English walnut, with a shell nearly as hard as that of a hickory nut, from which are carved effective ornaments, black as jet, and capable of receiving a high polish. The oily kernels were formerly strung on bamboo splints by the natives for torches, whence, to this day, a lamp is an ipu kukui.

Another native plant, abundant in the mountains, you will often see planted for hedges—a Dracaena (more properly Cordyline)—but with green, not red or variegated, foliage. The natives call it ti, and find many uses for it. The roots which are three to six inches thick and several feet long are roasted or steamed in underground ovens, sugar being produced abundantly in the process. In this condition it is eaten, or rather chewed and the juice sucked from it, but the principal use made of it by the natives is to produce okolehao, a kind of moonshiner's whiskey. The leaves take the place of wrapping paper in the fish market. Haoles (white people) make a bungle of putting up packages with it, but the native Hawaiian is very dextrous in its use, and the imitative Chinaman succeeds equally well.

Banana trees you see everywhere, but not generally planted for ornament. The trade wind blows too constantly to allow them to keep a whole leaf more than a day or two, unless under shelter of a house. The stranger is surprised at their variety, as different one from another as the varieties of pear or apple. Some grow on small "trees," not more than six feet high, others run up fifteen, twenty and even twenty-five feet. The rapidity of growth is something amazing. Cut off the trunk of a half grown plant—you find that it is made up simply of the sheaths of leaf stalks, the center occupied by the coming leaf, which immediately begins to push forward so that in a few minutes it projects noticeably, and in half a day it will have grown out several inches.

The fruit of the different varieties varies greatly in size, shape color and flavor; the fruit clusters in some varieties are very large, in others always small. Of the thousands of blossoms produced from each "bud," only a few, fifty or less to two hundred of the first, are followed by fruit; a seed is never developed.

One variety has the fruit cluster erect instead of pendant. Some are good to eat uncooked, and spoiled by cooking, others are unpalatable unless cooked, when they are delicious.

You would not distinguish a plant of Manila hemp from a banana "tree," but the fruit of the former is insipid, and filled with perfectly developed seeds.

Your guide will point out to you as the traveler's palm a plant which your botanist's eye will recognize as a banana rather than a palm. Unlike the banana it is a branching perennial plant, and unlike banana, its great banners of leaves are so tough in texture that they are but little split to pieces by the wind. The flower clusters are lateral, not terminal, and the bracts are persistent, so that the fruit is concealed from view. You find, however, that it resembles a banana in shape, although only three or four inches long. But the part of the fruit which in the banana is the edible pulp is tough and horny, and your curiosity to know what is inside subsides after you have tried your jackknife on it a while. You will make a mistake, though, if you throw the refractory thing away. Take it home and let it lie a day in the sun and you will find that your curiosity was justified. The tough fruit yields to the persuasion of the sun, and splits into three valves, which separate and recurve, revealing one of Nature's marvels. Each valve is found to hold two lines of seeds, each enveloped in a fantastic jacket of deep, clear blue. What for? That is more than I can tell, but the bony bananas make very pretty ornaments in a botanist's collection.

One of the most stately trees seen in Honolulu is the mango. Compact in its growth, its foliage is dense, consisting of linearlanceolate, rather rigid leaves, six to nine inches long, dark green when mature, but while young in the spring, of a rich purple-red color; the new leaves contrasting with those of the last year's growth, which in a tropical tree are of course persistent. Following the flowers, which are not more showy than those of our native sumacs, comes a fruitage which bends low the sturdy boughs of the tree. Nature outdid herself in forming and painting the mango. The curves of its outline are faultlessly graceful—the fruit ovoid, but flattened a little, and with the two sides unequally developed, giving it something of a comma shape. The fruit when ripe is a rich yellow, with the side exposed to the sun-light crimsoned, as in red-cheekedapples. But then there are as many varieties of mango as of apple.

A beautiful sight, but as yet a rare one in Honolulu, is a litchi tree (nephelium litchi) in full fruit. At a little distance you would mistake the separate fruits for exceptionally large and rich colored strawberries, and the trees are so loaded that they seem a mass of crimson. The fruit, which is about one and a quarter inches in diameter, contains a single large brown seed, surrounded by a juicy, but rather firm pulp like that of a malaga grape, the whole covered with a rough skin, thin, but almost woody in texture. The pulp is sweet with a flavor something like that of a musky grape, but with a suggestion of smokiness that leaves you divided in your mind whether you care to try another. If you decide in favor of such trial, you may come to understand how the Chinaman can consider this the most luscious of all fruits.

There is nothing beautiful about a guava tree, except its white, rose-like blossoms, and its profusion of golden-yellow fruit. The habit of the tree or bush is straggling, the foliage coarse, and often disfigured by a black fungus growth. It is rarely planted, but it grows spontaneously on the uplands and in the valleys, forming, over extensive tracts, a dense chaparral. Thousands of tons of the fruit go to waste every year. Under Annexation we may expect that these will be manufactured into delicious jelly, for which there should be a good demand.

The plebian guava has an aristocratic cousin, called the mandarin guava, which forms an ornamental tree of considerable size—its trunk and branches smooth from exfoliation of the bark, its foliage of rather small obovate, thick, shining leaves—the fruit small and quite acid.

A third species, Psidium Cattleyana, with similar foliage, grows only into a small shrub, whose fruit is an inch or less in diameter, globular, red, and quite acid, though of an agreeable flavor. It is known as the strawberry guava.

The orange family is well represented of course, the trees, orange, lime, lemon, shaddock, citron, etc., having a very strong family resemblance, and all ornamental, particularly when in fruit. The trees naturally have a more luxuriant growth than in California, but are not more prolific.

A characteristic plant in Honolulu, especially about the houses of natives is the papaya. An erect trunk, generally, but not always unbranched, bearing at the summit a cluster of large palmately lobed or divided leaves, fifteen to twenty inches in diameter on petioles two feet long, in the axil of each, in the female plant, a bud, blossom or fruit. There will thus be always fruit in all stages of growth, the lowest quite ripe and yellow, the rest green. The fruit is melon-like in size and structure, obovoid and four to five inches in diameter, but the peppery seeds are surrounded with a fleshy covering. A plant will ripen several of these fruits each week for several years. The male tree produces great panicles of white blossoms having a delicious spicy fragrance.

Another tree during the summer months will attract especial notice by its tempting display of fruit; this is the avocado, more commonly known as the alligator pear, Persea gratissima. The tree is not usually large, nor is its foliage particularly attractive—the rather coarse, somewhat rough, obovate leaves six or eight inches long. The fruit is commonly elongated pear shape—sometimes club shaped, occasionally curved like a crooknecked squash, but also sometimes quite spherical, smooth skinned, green until quite mature, then in some varieties, suddenly changing to a dark purple like that of the egg plant fruit, in others becoming somewhat yellowish. The weight might range from eight to thirty ounces, according to the variety, or rather according to the individual tree, for each seems to be a law unto itself. The fruit contains a single

(Continued on page 7.)

FOUR TONS TO ACRE

Annual Meeting of the Waimea Sugar Company.

The Waimea Sugar Mill company held its annual meeting yesterday morning at 10 o'clock in the assembly room over Castle & Cooke's. The election of officers resulted as fillows:

W. E. Rowell, president; J. A. Gilman, vice president; E. D. Tenney, secretary; W. A. Bowen, treasurer; E. P. Chapin, director, and T. Richard Robinson, auditor.

Manager Fassoth's report, dated Waimea, Kauai, January 12, was presented as follows:

I beg to submit my report for the year ending December 31, 1903.

Crop 1903.—During the past twelve months we have taken off 110 acres cane, yielding an average of 3.9 tons sugar to the acre. 72 acres of rattoons are carried over from crop 1903. This cane did not ripen, but after application of the new Waimea River water started a vigorous growth and it has seemed advisable to let it stand a few months longer.

Crop 1904.—This consists of 100 acres plant cane and 90 acres rattoons, also 72 acres of rattoons carried over from crop 1903. The planting was delayed until completion of the new ditch early in September, and I should be inclined to put off harvesting the cane from September (the regular period for the commencement of cutting) until January of 1905, thus giving the plant cane a period of about 16 months in which to mature. But it will be easier to judge when the cane is further advanced.

Labor.—The contract made with the Japanese Co., for the entire care of the fields and delivery of cane to the mill, I am glad to say works very satisfactorily; they are working faithfully and seem satisfied with their engagement so far, realizing that they are working for themselves as much as they are for their employers.

Improvement—The mill has been thoroughly overhauled and a new roller put in to replace one which was broken, so that I do not look for further heavy charges for repairs.

Waimea Ditch.—Construction was commenced on January 10th, 1903, and the water was turned on September 2nd, 1903. The delay of three months being occasioned by the late arrival of material. The late turning on of the water has caused an unsatisfactory and disappointing year, but the young cane is full of promise, entirely different from anything we have had for some years.

Treasurer W. A. Bowen submitted a report covering the following heads:

Permanent Improvements and Equipment; Operating Expenses; Revenue Account; Balance Sheet Condensed; Treasurer's Summary for the Year 1903.

Under Permanent Improvements and Equipment, a balance for December 31, 1903, was given at $142,196.71 for 1903, a total of $179,949.26.

Under Operating Expenses for 1903, the report an expense of $37,513.79. Of this $11,036.25 was for cultivating and harvesting, for which the company paid contractors for 4905 tons of cane at $2.25 per ton. The steam pump expense for six months was $6,351.62.

In the Profit and Loss statement, the balance brought down is $42,662.62.

The assets are given as follows:

Permanent Improvements and Equipment Accounts as per Exhibit "A"	$179,949.26
Cal. and Haw. Sugar Ref. Co. (Investment)	4,550.00
Cultivation Contractors	12,613.43
Cash on Hand	44.19
Containers	200.00
Lime, Oils, Etc.	75.00
Spare Flumes and Pipes	371.80
Sugar unreported (estimated)	11,028.94
Trade and Personal Accounts	135.53
Deficit at Debit of Profit and Loss	42,662.62
	$251,630.86

ANOTHER FINANCIAL CONFERENCE

There is to be another conference between business men and the Government this morning. It has been arranged for 9:30 o'clock in the executive chamber. Governor Carter was absent on Hawaii when last week's conference was held by representatives of the mercantile organizations with heads of departments relative to the Territorial finances.

Today's conference is arranged to be with the Governor himself, with an intimation from the members of the business deputation that they "would like to have the Treasurer and Auditor present, if acceptable to the Governor." The deputation itself will be reinforced with bankers, an element that was absent at last week's conference.

Those meeting the Governor will be F. J. Lowrey and Jas. F. Morgan of the Chamber of Commerce; President Geo. W. Smith, Robert Catton and James Wakefield of the Merchants' Association, President C. M. Cooke of the Bank of Hawaii, Cashier E. I. Spalding of the bank of Claus Spreckels & Co. and Director M. P. Robinson of the First National Bank of Hawaii.

It is probable that the mattter of the test case to be brought for the purpose of establishing the legality of appropriation bills, as it is confidently believed can be done, will be discussed. There is said to be no doubt that the Government can obtain advances of necessary funds against this year's taxes if only the validity of Treasury warrants be established.

ADMINISTRATOR'S NOTICE TO CREDITORS.

The undersigned, duly appointed administratrix with the will annexed of the estate of Keawe Kailua, late of Kalaupapa, Molokai, deceased testate, by the Hon. J. W. Kalua, Circuit Judge of Maui, hereby gives notice to all persons having claims against said estate, to present same to Henry Smith at the Judiciary Building, in Honolulu, Island of Oahu, within six months from date, or they shall be forever barred. And all persons owing said estate are hereby requested to make immediate settlement of same with the said Henry Smith.

Dated Honolulu, Feb. 4, 1904.

MALA KAILUA,
Administratrix with the Will Annexed,
Estate of Keawe Kailua.
2561—6t—F

NOTICE.

TO ALL WHO ARE CONCERNED:

Notice is hereby given that a petition has been filed by the Territory of Hawaii for adjudication of water rights of the Valley of Kanaha, in which a controversy has arisen between the said Territory and the Pioneer Mill Company, Limited, therefore the hearing of said case is set for the 4th day of March, 1904, at 2 o'clock p. m. and all parties interested in the water rights of said Valley of Kanaha are ordered to appear before me at the premises of the Lahainaluna Seminary, Lahaina, Maui, at the aforesaid time, failing which the case will be adjudicated ex parte by default.

LYLE A. DICKEY.
Commissioner of Private Ways and Water Rights for the Island of Maui.
2561—Feb. 5, 12, 19.

WANTED BOY PROPERLY SPANKED.

A schoolteacher boxed the ears of a pupil a few days ago. The boy told his mother, and the next day the teacher received the following note: "Nature has provided a proper place for the punishment of a boy, and it is not his ear. I will thank you to use it hereafter."—Muscotah (Kan.) Record.